

### Protocol: Identify Conditions that Solubilize Reversibly Aggregated Protein Samples

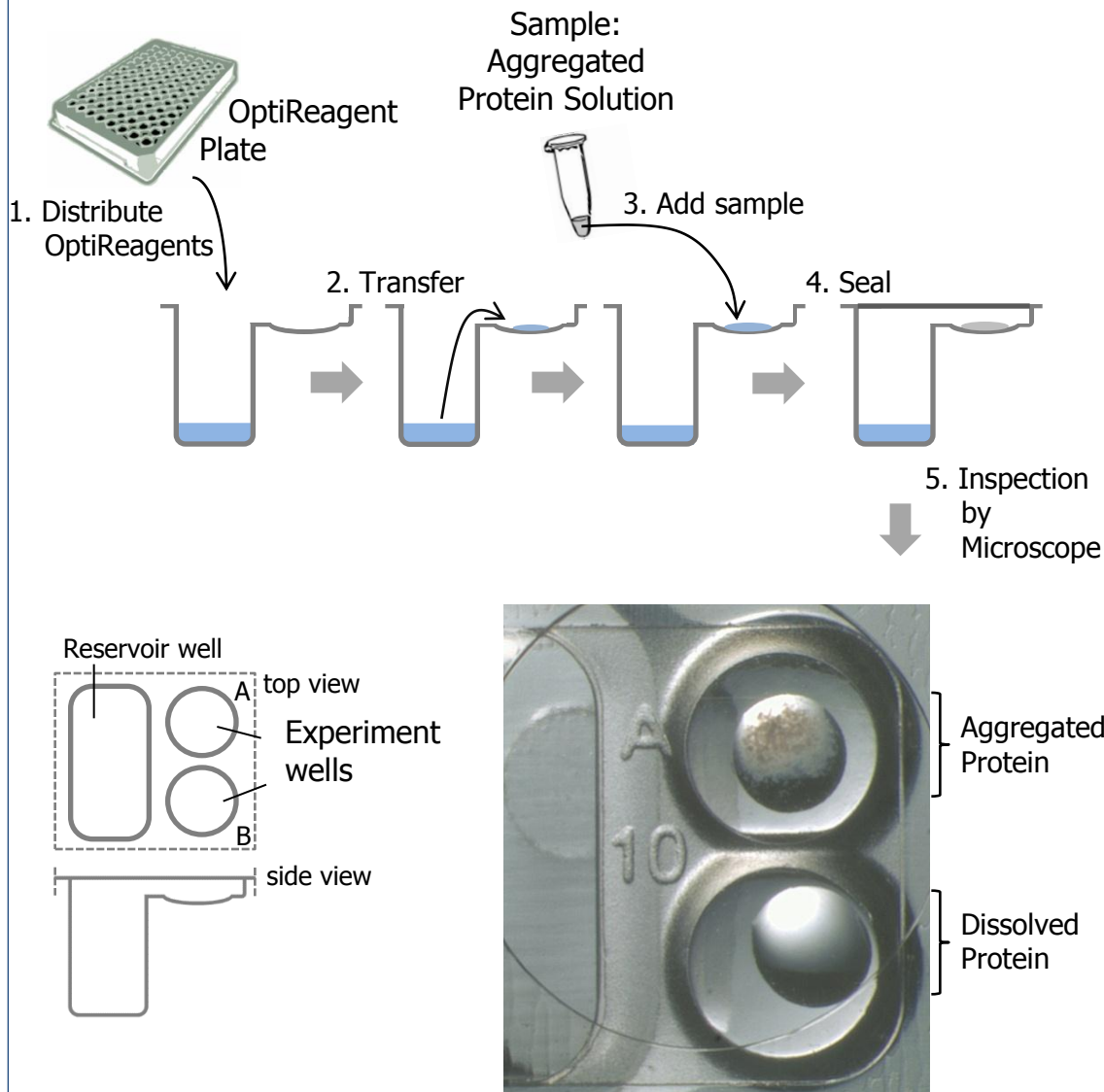
#### Materials:

1. Aggregated protein sample (ca. 100  $\mu$ L – 200  $\mu$ L of total volume for each protein sample to be tested).
2. An Inspection Plate with 2 x 96 OptiResc experiment wells. Two different experiments can be performed per plate or duplicate experiments per plate. An experiment requires ca. 100  $\mu$ L of protein sample, duplicate experiments require 200  $\mu$ L. (Up to 6 different experiments can be performed using a kit).
3. OptiReagent plate.
4. Multichannel pipette is recommended.

#### Protocol for duplicate solubilization experiments:

1. Distribute 50  $\mu$ L aliquots from wells of the OptiReagent plate into reservoir wells of the OptiResc Inspection Plate (all 96 wells).
2. Transfer 1.0  $\mu$ L of reagent from each reservoir well of the OptiResc Inspection Plate to each of the adjacent experiment wells.
3. Add 1.0  $\mu$ L of aggregated protein sample to experiment wells of the OptiResc Inspection Plate. Omit sample in position H1 (negative control).
4. Seal OptiResc Inspection Plate with one Seal Sheet.
5. Inspect small wells with a microscope, i.e. a dissecting stereo microscope and note the wells that contain precipitate (aggregated protein solution) or clear drops (dissolved protein).  
If no clear drops are seen, inspect again after 1 hour or 1 day.
1. Employ OptiReagent Listing (see reverse side of this brochure or [www.solublebioscience.com](http://www.solublebioscience.com) to identify solutions that yield clear drops.

**Scale up disaggregation** reaction by mixing equal volumes of aggregated protein sample with solution that was identified with the OptiResc kit.



# OptiResc™ Protein Aggregate Solubilization Kit

## Product Information

### Content:

- 1 x 96 well OptiReagent Plate
- 3 x 96 x 2 well OptiResc Inspection Plate
- 3 x 96 well Seal sheets
- Quick Start Guide and MSDS

## Purpose

### OptiResc Protein Aggregate Solubilization Kit

Systematic solution design and array-based deaggregation technology for:

- **Solubilizing reversibly aggregated protein samples**

For updated instructions and additional information please refer to [www.solublebioscience.com](http://www.solublebioscience.com).

One OptiResc kit contains all consumable materials to search solution conditions for up to six (6) different, reversibly aggregated protein samples.

## Order Information

Order Cat #: SOL-Resc

OptiResc Protein Aggregate Solubilization Kit

Price: \$ 279 USD (3 pack discounted to 789.00 USD)

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## Reagent Listing

Well		Buffer#			Additive		Well		Buffer#			Additive	
#	Row Col		Conc unit	pH	NAME	Conc unit	#	Row Col		Conc unit	pH	NAME	Conc unit
1	A 1	Glycine	100 mM	3.0			49	E 1	Glycine	50 mM	3.0	Na <sub>2</sub> SO <sub>4</sub>	500 mM
2	A 2	Citric Acid	100 mM	3.2			50	E 2	Sodium Acetate	50 mM	4.5	Na <sub>2</sub> SO <sub>4</sub>	500 mM
3	A 3	PIPPS	100 mM	3.7			51	E 3	Bis-Tris	50 mM	6.0	Na <sub>2</sub> SO <sub>4</sub>	500 mM
4	A 4	Citric Acid	100 mM	4.0			52	E 4	MOPS	50 mM	7.0	Na <sub>2</sub> SO <sub>4</sub>	500 mM
5	A 5	Sodium Acetate	100 mM	4.5			53	E 5	Imidazole	50 mM	8.0	Na <sub>2</sub> SO <sub>4</sub>	500 mM
6	A 6	Na/K Phosphate	100 mM	5.0			54	E 6	CHES	50 mM	9.5	Na <sub>2</sub> SO <sub>4</sub>	500 mM
7	A 7	Sodium Citrate	100 mM	5.5			55	E 7	Citric Acid	50 mM	3.2	Arg/Glu*	50 mM
8	A 8	Na/K Phosphate	100 mM	6.0			56	E 8	Na/K Phosphate	50 mM	5.0	Arg/Glu*	50 mM
9	A 9	Bis-Tris	100 mM	6.0			57	E 9	ADA	50 mM	6.5	Arg/Glu*	50 mM
10	A 10	MES	100 mM	6.2			58	E 10	HEPES	50 mM	7.5	Arg/Glu*	50 mM
11	A 11	ADA	100 mM	6.5			59	E 11	Tris	50 mM	8.5	Arg/Glu*	50 mM
12	A 12	Bis-Tris Propane	100 mM	6.5			60	E 12	CAPS	50 mM	10.0	Arg/Glu*	50 mM
13	B 1	Ammonium Acetate	100 mM	7.0			61	F 1	Glycine	50 mM	3.0	Tween 20	1 % (w/v)
14	B 2	MOPS	100 mM	7.0			62	F 2	Sodium Acetate	50 mM	4.5	Tween 20	1 % (w/v)
15	B 3	Na/K Phosphate	100 mM	7.0			63	F 3	Bis-Tris	50 mM	6.0	Tween 20	1 % (w/v)
16	B 4	HEPES	100 mM	7.5			64	F 4	MOPS	50 mM	7.0	Tween 20	1 % (w/v)
17	B 5	Tris	100 mM	7.5			65	F 5	Imidazole	50 mM	8.0	Tween 20	1 % (w/v)
18	B 6	EPPS	100 mM	8.0			66	F 6	CHES	50 mM	9.5	Tween 20	1 % (w/v)
19	B 7	Imidazole	100 mM	8.0			67	F 7	Citric Acid	50 mM	3.2	Solubilisin II™	100 % (w/v)
20	B 8	Bicine	100 mM	8.5			68	F 8	Na/K Phosphate	50 mM	5.0	Solubilisin II™	100 % (w/v)
21	B 9	Tris	100 mM	8.5			69	F 9	ADA	50 mM	6.5	Solubilisin II™	100 % (w/v)
22	B 10	CHES	100 mM	9.0			70	F 10	HEPES	50 mM	7.5	Solubilisin II™	100 % (w/v)
23	B 11	CHES	100 mM	9.5			71	F 11	Tris	50 mM	8.5	Solubilisin II™	100 % (w/v)
24	B 12	CAPS	100 mM	10.0			72	F 12	CAPS	50 mM	10.0	Solubilisin II™	100 % (w/v)
25	C 1	Glycine	50 mM	3.0	NaCl	150 mM	73	G 1	Glycine	50 mM	3.0	Glycerol	20 % (w/v)
26	C 2	Sodium Acetate	50 mM	4.5	NaCl	150 mM	74	G 2	Sodium Acetate	50 mM	4.5	Glycerol	20 % (w/v)
27	C 3	Bis-Tris	50 mM	6.0	NaCl	150 mM	75	G 3	Bis-Tris	50 mM	6.0	Glycerol	20 % (w/v)
28	C 4	MOPS	50 mM	7.0	NaCl	150 mM	76	G 4	MOPS	50 mM	7.0	Glycerol	20 % (w/v)
29	C 5	Imidazole	50 mM	8.0	NaCl	150 mM	77	G 5	Imidazole	50 mM	8.0	Glycerol	20 % (w/v)
30	C 6	CHES	50 mM	9.5	NaCl	150 mM	78	G 6	CHES	50 mM	9.5	Glycerol	20 % (w/v)
31	C 7	Citric Acid	50 mM	3.2	NaCl	500 mM	79	G 7	Citric Acid	50 mM	3.2	Betaine	1 M
32	C 8	Na/K Phosphate	50 mM	5.0	NaCl	500 mM	80	G 8	Na/K Phosphate	50 mM	5.0	Betaine	1 M
33	C 9	ADA	50 mM	6.5	NaCl	500 mM	81	G 9	ADA	50 mM	6.5	Betaine	1 M
34	C 10	HEPES	50 mM	7.5	NaCl	500 mM	82	G 10	HEPES	50 mM	7.5	Betaine	1 M
35	C 11	Tris	50 mM	8.5	NaCl	500 mM	83	G 11	Tris	50 mM	8.5	Betaine	1 M
36	C 12	CAPS	50 mM	10.0	NaCl	500 mM	84	G 12	CAPS	50 mM	10.0	Betaine	1 M
37	D 1	Glycine	50 mM	3.0	Trehalose	500 mM	85	H 1	H2O	100 %			
38	D 2	Sodium Acetate	50 mM	4.5	Trehalose	500 mM	86	H 2	H2O	100 %			
39	D 3	Bis-Tris	50 mM	6.0	Trehalose	500 mM	87	H 3					
40	D 4	MOPS	50 mM	7.0	Trehalose	500 mM	88	H 4				AmSulfate	3 M
41	D 5	Imidazole	50 mM	8.0	Trehalose	500 mM	89	H 5				Acetonitrile	80 % (v/v)
42	D 6	CHES	50 mM	9.5	Trehalose	500 mM	90	H 6	PEG 1450	10 %		NaCl	50 mM
43	D 7	Citric Acid	50 mM	3.2	TMAO	500 mM	91	H 7				DTT	1 mM
44	D 8	Na/K Phosphate	50 mM	5.0	TMAO	500 mM	92	H 8				DTT	5 mM
45	D 9	ADA	50 mM	6.5	TMAO	500 mM	93	H 9				DTT	15 mM
46	D 10	HEPES	50 mM	7.5	TMAO	500 mM	94	H 10				BME	2.5 mM
47	D 11	Tris	50 mM	8.5	TMAO	500 mM	95	H 11				BME	10 mM
48	D 12	CAPS	50 mM	10.0	TMAO	500 mM	96	H 12				BME	20 mM

TMAO, Trimethylamine N-Oxide; PIPPS, Piperazine-N, n'-Bis (3-Propanesulfonic Acid); MES, 2-(N-morpholino) ethanesulfonic acid; MOPS, 3-(N-morpholino) propanesulfonic acid; HEPES, 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid; Arg/Glu\*: 50mM of each Arginine and Glutamate; DDT, DL-Dithiothreitol; BME, 2-Mercaptoethanol; Betaine, Trimethyl-Glycine; CAPS, N-cyclohexyl-3-aminopropanesulfonic acid; ADA, N-(2-Acetamidimino)diacetic Acid; Tris, tris(hydroxymethyl)aminomethane; CHES, 2-(N-Cyclohexylamino)ethane Sulfonic Acid; EPPS, N-(2-hydroxyethyl)piperazine-N-(3-propanesulfonic acid).  
# pH values for buffers used only; \* each amino acid is 50 mM